Insect and Disease Control
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BIOLOGICAL EVALUATION
A Tent Caterpillar on Fremont Poplar
Capital Reef National Park
1974

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INTRODUCTION

On May 16, 1974, Entomologist Douglas L. Parker examined a tent caterpillar infestation in Fremont poplar in the Park. He was accompanied by James Taylor, Chief Ranger. Infested trees were located along the scenic highway that runs through the Park. Due to the sparce vegetation in this portion of Utah, the trees have considerable esthetic value. Park personnel were interested in limiting damage caused by this defoliator.

TECHNICAL INFORMATION

Insect: A tent caterpillar, Malacosoma incurvum discoloratum (Neumoegen)

Host tree: Fremont poplar, Populus fremontii S. Watson.

Location: Capital Reef National Park, National Park Service, Utah.

Extent of outbreak: Scattered groups of trees were defoliated over approximately a three-mile stretch of the Fremont River.

BIOLOGICAL INFORMATION AND DISCUSSION

This is the second year that tent caterpillar activity was detected by Park personnel. In 1973, only a few trees were lightly defoliated, but the extent and severity of defoliation increased in 1974. However, there should be little or no permanent damage to the trees. Fremont poplar has a remarkable propensity to endure defoliation and refoliate after the insect feeding has ceased.

This tent caterpillar has a one-year life cycle. It overwinters in the egg stage. When warmer temperatures start in the spring, larvae chew through the eggshell and begin feeding on newly developing leaves. The small larvae also begin building unsightly silken tents on the host plant. As larvae grow, they consume greater quantities of foliage, and a tree can be completely defoliated if there are a sufficient number of larvae. Once the larvae have matured, they begin a prepupational wandering to find a suitable location to pupate. Pupation can occur in almost any protected site, e.g., in bark crevices, beneath rocks, on buildings, etc. The pupal stage lasts approximately two weeks. Moths emerge from the cocoons, mate, and females lay egg masses on the host plant.

Pupation had already begun before May 16, and it was estimated that defoliation of infested trees would cease in a week or two. Most defoliated trees should refoliate in June.

RECOMMENDATIONS

Since pupation had begun, control of the infestation with chemicals could not be recommended because little additional foliage on infested trees would be saved and the insect population could not be adequately suppressed.

An egg mass survey should be conducted next fall to determine if a population increase will occur in 1975. If a population increase is forecast, specific information about control alternatives will be provided.